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JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11)Publication number: **10313896 A**

(43)Date of publication of
application: **02. 12 . 98**

(51)Int. Cl **C12Q 1/37**
// C07K 5/103
C07K 5/11
C07K 7/06

(21)Application number: 09126087

(22)Date of filing: 15 05 97

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(54)NEW SYNTHETIC SUBSTRATE FOR
MEASUREMENT OF ACTIVITY HAVING
CHROMOPHORE OF FLUOROPHORE TO
MATRIX METALLOPROTEASE

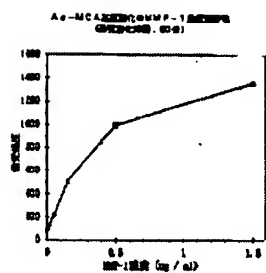
(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a new synthetic substrate necessary for screening of a matrix metalloprotease (MMP) inhibitor and suitable for rapid, simple and highly sensitive MMP assay system, etc., capable of carrying out multi-treatment by including a specific chemical structure.

SOLUTION: This compound is represented by formula I [Z is a protective group of N terminal; Y is a chromophore or a fluorophore; B is a peptide residue containing one or more amino acid residues hardly ingested with aminopeptidase; C is a peptide residue comprising an amino acid residue other than the amino acid residues hardly ingested with aminopeptidase], e.g.

Suc-Lys-Pro-Leu-Gly-Leu- Phe-Ala-Arg-MCA (MCA is 4-methyl-coumarin-7-yl-amide). Furthermore, activity of MMP and MMP containing double digesting process by aminopeptidase are preferably measured by using the synthetic substrate. The synthetic substrate is obtained by reacting, e.g. a compound of formula II with a compound of formula III in the presence of a condensing agent and then deprotecting the resultant reaction product.

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Ac-Lys(Boc)-Pro-Leu-Gly

II

Leu-Phe-Ala-Arg(poc)-Glu

III